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Parenthood and life satisfaction. Russia in comparative perspective. DRAFT

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Abstract

The literature on life satisfaction trajectories during parenthood rests so far mainly on data from Western countries. This paper fills this gap by estimating the dynamics of life satisfaction associated with parenthood in Russia, a country which is different not only in terms of economic and historical factors, but also has a peculiar pattern of fertility and parenthood.

We use the data of the Russia Longitudinal Monitoring Survey of HSE and fixed effects regression for panel data to estimate the dynamics of life satisfaction during parenthood, for men and women separately. We also investigate a range of potential moderating factors pointed out by the literature.

The results demonstrate that in Russia the trajectory of life satisfaction during parenthood differs from the one observed in Western countries. In particular, the substantial and temporary positive effect of the first childbirth on life satisfaction of women is absent. Consistently with the literature, more educated men, and people in stable relationships enjoy parenthood more, and persons who enter parenthood at later ages are overall happier. However, we also find that persons with lower incomes and those living in rural areas experience stronger increase of life satisfaction at older ages of the child than those who are more wealthy and living in cities.

This research is the first one to examine life satisfaction changes associated with parenthood in a country strikingly different from the Western European countries investigated previously. The results are consistent with some regularities known from the literature, but also show patterns previously not reported by the literature.

*This study uses "Russia Longitudinal Monitoring survey, RLMS-HSE", conducted by the National Research University Higher School of Economics and ZAO "Demoscope" together with Carolina Population Center, University of North Carolina at Chapel Hill and the Institute of Sociology RAS.

Keywords:
Fertility; Fixed effect analysis; Life satisfaction; Parenthood; Russia; Well-being

1 Introduction

Previous research provided broad evidence on how parenthood affects life satisfaction (Baranowska and Matysiak, 2011; Kohler et al., 2005; Baetschmann et al., 2012; Myrskylä and Margolis, 2012). Entering parenthood is associated with a strong increase of life satisfaction, in particular among women, and in particular in case of the first child (Baetschmann et al., 2012; Myrskylä and Margolis, 2012). This change is temporary: e few years after the birth life satisfaction returns to the initial level. The effect is weaker for men and for higher parity births. Before the first birth life satisfaction grows gradually (Baetschmann et al., 2012; Myrskylä and Margolis, 2012), which suggests that improving living conditions (including employment, relationship status, financial situation, et.c.) lead to the decision about having a child. This is consistent with results showing that persons more satisfied with their lives have higher probability of becoming parents or having another child (Parr, 2010).

This evidence suffers from a serious limitation:it rests on data coming from a limited, selected group of countries. This must be so, because analyses of the relationship between fertility and life satisfaction require long panel data. Such data are available only in some countries, which tend to be relatively wealthy and developed. Up to date, the situation in Germany (as recorded by the German Socio-Economic Panel) has been analyzed thoroughly (Baetschmann et al., 2012; Myrskylä and Margolis, 2012; Pollmann-Schult, 2014; Clark et al., 2008). We know how situation looks like in United Kingdom (Myrskylä and Margolis, 2012), and we know something about Poland (Baranowska and Matysiak, 2011) and Australia (Parr, 2010). Well-known is also the analysis of data on monozygotic danish twins (Kohler et al., 2005). Consistency of these results leads researchers to conclude that this is a general pattern. However, many countries of the world differ from the relatively developed and rich West. This concerns socio-economic development, gender equality, and fertility patterns, all of which may affect the life satisfaction consequences of parenthood. For some of these countries long panel data are available for analysis, and have not been used previously.

The goal of this paper is to extend our knowledge of life satisfaction dynamics in the period preceding and following childbirth by focusing on a previously not analyzed country: Russia. Russian Federation in many aspects constitutes a specific and different case. In political sense, it is the main element of the former Soviet empire, and a country which went through deep transformations following the fall of communism. In economic terms, it struggles with the consequences of severe economic crisis of the nineties, and with high and growing social inequalities. In demographic sense, it is a society whose

fertility has been dramatically limited, mainly through limiting second and higher parity births, which has created a very specific fertility pattern. It is also a society with one of the highest divorce ratios in the world.

Our analysis of life satisfaction dynamics associated with parenthood in Russia reveals regularities which resemble those observed in the West, but some results are strikingly different from what we know so far. This emphasizes the limits of our current knowledge and suggests the need to push these borders by investigating new countries and new regions of the world.

2 Fertility and parenthood in Russia

Total fertility rate in Russia in 2013 was 1.6 (World Bank, 2013), which is not much different from fertility rate observed in many European countries (e.g. 1.4 in Germany, 1.3 in Poland, 1.9 in United Kingdom, World Bank, 2013). Fertility rate of 1.6 is far below the replacement level, and is a result of a long-term continuous decrease, which turned dramatic during the 1990's (in 1997 the total fertility rate fell to 1.23 Kharkova and Andreev, 2000), and was followed by a partial recovery. The steep downward trend, combined with the negative natural growth, raised the debate about the Russian "demographic catastrophe" (Kohlmann and Zuev, 2001; Zakharov and Ivanova, 1996).

The strong decrease of fertility in the 1990's occurred during the economic crisis (the falling fertility closely mirrored the falling GDP per capita, see: Kohler and Kohler, 2002) and the breakdown of the social welfare system (Kohlmann and Zuev, 2001).[1] Therefore, economic factors became the dominant explanation of the low fertility levels. However, analyses on micro-level did not support this explanation.[2]

Even though the rather low fertility rate in Russia places it close to other Central and Eastern European countries, the Russian pattern of fertility stands out with low age at first birth, low childlessness, and low fertility at higher parity levels (Gerber and Berman, 2010).

Both women and men in Russia enter parenthood at younger ages than in the West (Zakharov and Ivanova, 1996; Kohler and Kohler, 2002; Kohlmann and Zuev, 2001). Mean age of women at birth of first child in Russia in 2009 was 24.6 years (compared to 26.3 years in Poland, 28.8 in Germany, 27.6 in United Kingdom United Nations, 2014).This means that the low fertility in Russia did not occur through postponing of marriage and childbearing, so characteristic for the second demographic transition in Western Europe.

[1] Gerber and Perelli-Harris (2012) showed the importance of maternity leaves for higher order fertility during the 1990's in Russia.

[2] For example, Kohler and Kohler (2002) found that the probability of having another child was not suppressed among women and couples affected by labor market crisis. Similarly, the results of Kharkova and Andreev (2000) showed no essential fertility differentiation by economic origin, which would occur if economic factors were the main driving force.

The literature connects early parenthood with younger than in the West age of accomplishing education, strong reliance on help of grandparents (Rotkirch and Kesseli, 2012), and lack of perspectives for economic stability (waiting for economic stability may be a factor delaying parenthood Billari et al., 2006; Rotkirch and Kesseli, 2012). Early first births are also associated with lack of explicit couple's decision if to enter parenthood and when (Rotkirch and Kesseli, 2010). Decision to have a child is largely driven by woman's choice, and parenthood is considered more mother's than men's responsibility (Rotkirch and Kesseli, 2010).

Early parenthood coexists with low levels of childlessness (Philipov and Jasilioniene, 2008). In seventies and eighties the proportion of childless women was around 4–7% (Zakharov, 2008). (Estimations for birth cohorts point out to the value of below 10% for the cohorts born in the 1970s, and under 15% for cohorts born in the 1980s (Zakharov, 2008).) This feature is interpreted as a trace of the dominating role of motherhood among the life goals of Russian women, which continues to be more important than career or self-realization (Zakharov, 2008). Low childlessness also suggests that entering parenthood is not preceded by reflection, and is rather considered a natural consequence of forming a romantic relationship (in-depth interviews with women in Sankt Petersburg, Rotkirch and Kesseli, 2012).

Finally, the decrease of fertility results from limiting of the second and third births (Kharkova and Andreev, 2000; Perelli-Harris, 2006). Indeed, the parity progression ratio to the second child of the cohort born 1959-63 in Russia is 68.6% (Zakharov, 2008, Table A3), whereas the same values in low fertility countries for the cohort born 1960 range between 73.4% in Romania to 85.2% in England and Wales (Frejka and Sardon, 2007, Table 6). The difference for the progression to the third child is even larger: 22.4% in Russia vs. between 29.2% in Czech Republic to 43% in England and Wales. Even though the norm for two-child family remains strong in Russia, one-child family is frequent (especially among educated women from urban areas, see: Zakharov, 2008). However, the two-child ideal is stronger in general ("good for the society") than privately ("good for my family"): among Sankt Petersburgian women, 21.8% declared that having one child was best for their families (two children – 58.4%), whereas only 2.9% considered this number best for the society (two children – 68%). This is related to economic barriers, health concerns, and the difficulties in combining parenthood with employment. As a result, having two or more children is in Russia often perceived as a sign of good material standing and a family success (Rotkirch and Kesseli, 2012).

3 Life satisfaction dynamics during parenthood

Analyses of panel data in Western countries showed that parenthood, and especially the birth of the first child, is associated with temporarily elevated level of life satisfaction

(Myrskylä and Margolis, 2012; Baetschmann et al., 2012). The fixed-effects analyses point out that in the period directly preceding and directly following the firth birth life satisfaction in Germany was higher by 0.3 point (on a $0-10$ point scale), and in UK by about 0.4 (on a $0-10$ point scale) than 3-5 years before the birth (joint analysis for men and women Myrskylä and Margolis, 2012). This effect was stronger among women than among men, and stronger for the first birth than for subsequent births (Myrskylä and Margolis, 2012). Life satisfaction was increasing already 2 years before the birth (anticipation effect: Myrskylä and Margolis, 2012), which suggests that the first childbirth occurs in a special moment when couples are emotionally, socially, and economically ready for the arrival of a child (Baetschmann et al., 2012). For German data, Baetschmann et al. (2012) observed the anticipation effect in women already 4 years before the first birth, but only in case of planned births.

The literature listed also factors that moderate the relationship between parenthood and life satisfaction. The increase of life satisfaction is stronger among older parents, among married persons, and – in men – among the more highly educated.

4 Hypotheses

We currently do not know the dynamics of life satisfaction in the period surrounding transition to parenthood in Russia. A natural hypothesis is that the regularities observed in Western countries hold also in the West. This would imply the following patterns.

Hyp. A1 In Russia, life satisfaction increases when people become parents. The increase is stronger among women than among men, and stronger for the first birth than for subsequent births.

Hyp. A2 The increase of life satisfaction occurs about 3-5 years before the birth (anticipation effect). Following the birth life satisfaction declines.

Hyp. A3 More educated fathers, parents older at birth, and parents in stable unions experience stronger increase of life satisfaction during transition to parenthood than parents who are, respectively, less educated, younger at birth, and unmarried or experiencing divorce.

However, it is possible that the specificity of Russian fertility pattern has implications for the life satisfaction dynamics associated with the transition to parenthood.

First, it is not clear what are the consequences of the typically young (compared to Western countries) age at first birth in Russia. It is possible that this is the age when people in Russia are best prepared for parenthood. Such conclusion is consistent with the results showing that the expected happiness consequences of childbearing was highest for

Russians in their mid-twenties (Kohler, 2010), and is consistent with the high involvement of grandparents in childcare (Rotkirch and Kesseli, 2012).

Hyp. B1 In Russia, life satisfaction increases when people become parents. The increase is strongest among persons becoming parents in their mid-twenties (and not, as in Western countries, among older parents).

Alternatively, young age at first birth combined with low childlessness may indicate low selection to parenthood. In other words, among young parents there may be people consciously wanting children, but also relatively many persons not yet ready for parenthood. This suggests that the positive effect of the first birth on life satisfaction may be weaker than in the West; the same may apply to the anticipation effect. In contrast to that, the effect may be relatively stronger for the second child, because decision to have a second child seems to be taken more consciously (Rotkirch and Kesseli, 2010). Moreover, we know that parenthood at later ages in Russia resembles more the pattern typical for Western countries. Such children follow achieving educational, career, and economic goals, and are consciously planned projects of both parents (Rotkirch and Kesseli, 2010). As such, later parenthood may more often bring elevated levels of life satisfaction than young parenthood.

Hyp. C1 In Russia, life satisfaction increases when people become parents, however the increase is relatively weak in case of the first birth, and relatively strong in case of second and further births. Also the anticipation effect is relatively weak in case of first births.

Hyp. C2 In Russia, the positive effect of entering parenthood on life satisfaction is stronger among older parents.

Another specificity of Russia which may affect life satisfaction consequences of parenthood is a very high divorce rate (Philipov and Jasilioniene, 2008; Zakharov and Ivanova, 1996). In Western countries unstable partnerships decreased the positive effect of parenthood on life satisfaction. The high frequency of divorce in Russia may therefore lower the overall life satisfaction consequences of parenthood compared to the West.

Hyp. C3 In Russia, stable marriage strongly moderates the life satisfaction consequences of parenthood. Overall life satisfaction consequences of parenthood are negatively affected by the high risk of divorce.

Alternatively, it is also possible, that family and other networks manage to compensate for the marital instability. In social contexts when divorce is frequent, it is also less stigmatizing than in context of rare divorce (Kalmijn, 2010). Moreover, in society where divorce is frequent, alternative support networks may compensate for the absence of fathers. This suggests that the effect of marital stability on life satisfaction consequences of parenthood may here be weaker than in the West.

Hyp. B2 In Russia, life satisfaction consequences of parenthood are weakly affected by marital instability, which is compensated by the support from other networks.

Finally, a specificity of Russia is that having two or more children is seen as a sign of social, economic, and family success. Highly educated women want more children (Perelli-Harris, 2006), and eventually have more children (Kohlmann and Zuev, 2001; Perelli-Harris, 2006) than less educated women. This may suggest that education moderates the effect of parenthood on life satisfaction not only among men but also among women.

Hyp. C4 In Russia, life satisfaction consequences of parenthood are more positive among more educated persons.

5 Data and methodology

5.1 Data

Cross-sectional analyses have consistently delivered a different set of conclusions on the relationship between parenthood and life satisfaction than longitudinal data (see, e.g., Margolis and Myrskylä, 2011; Stanca, 2012). It is now clear that the analysis of life satisfaction dynamics during parenthood requires longitudinal data to deal with selection issues and to reduce estimation bias.

The Russia Longitudinal Monitoring Survey of HSE (RLMS-HSE) is a good source of data for this research. It is a yearly household-based panel survey designed to measure the effects of Russian reforms on households and individuals. It has been used previously for analyzing some aspects of fertility in Russia (Kohler and Kohler, 2002; Perelli-Harris, 2006), but not to examine the dynamics of life satisfaction before and after childbirth.

RLMS-HSE uses a multi-stage probability sample divided into 38 strata based on geographical factors, level of urbanization, and ethnicity. The strata include Moscow city, Moscow Oblast, and Sankt Petersburg, as well as 35 randomly chosen regions, from which some remote areas were excluded to lower the costs. This analysis uses data from the 16 waves from the second stage of the program, covering the period 1994-2012 (waves 5-20). Characteristic of the sample, including the years when each wave was completed, sample size, number of parents in the sample and number of births in the sample are shown in Table 1.

5.2 Method

The analysis is run with fixed effects models for panel data, in which parental life satisfaction is regressed on the stages of parenthood. Fixed effects models control for the time-invariant unobserved heterogeneity of individuals (Allison, 2009), which may be particularly important for assessing the life-satisfaction changes associated with parenthood,

Table 1: Characteristics of the sample used in the analysis

Wave	Years	N	Nr of births			Nr of parents*
			1st	2nd	3rd	of children under 25
5	1994-1995	8893	68	55	10	4858
6	1995	8370	62	46	9	4462
7	1996	8017	31	29	5	4150
8	1997-1998	7890	33	28	13	3939
9	2000	7568	34	15	9	3521
10	2001	7893	34	28	9	3516
11	2002	7877	29	28	4	3395
12	2003	7776	23	38	7	3208
13	2004	7714	26	34	2	3089
14	2004-2005	7254	30	26	10	2708
15	2005-2006	9319	41	42	20	3454
16	2006-2007	9010	36	30	6	3305
17	2007-2008	8610	40	46	18	3019
18	2009-2010	8347	27	45	17	2801
19	2010-2011	14299	51	82	47	5281
20	2011-2012	14394	53	75	27	5163

Note: * includes also prospective parents
Source: RLMS-HSE, waves 5-20

because selection has been shown to play a role (Parr, 2010, showed selection of happier persons into parenthood).

The literature showed different life satisfaction dynamics depending on parity, and different effects for men and women (Myrskylä and Margolis, 2012), therefore we estimate separate models for the first, second, and third child, as well we stratify the analysis by gender.

We capture the dynamics of life satisfaction by including a set of dichotomous variables marking the stage of parenthood. Our analysis covers the period preceding the birth (3, 2 and 1 year before the birth, with period 4 or more years before the birth treated as the reference category), and we follow the parents up to the moment when their child is 24 years old. The changing age of the child is coded with a set of dichotomous variables. Formally, our model (for the first child) is described by Equation 1.

$$\begin{aligned} \mathrm{LS}_{it} = {} & \beta_{BB3} BB_{3it} + \beta_{BB2} BB_{2it} + \beta_{BB1} BB_{1it} + \beta_{Age0} Age_{0it} + \\ & + \beta_{Age1} Age_{1it} + \beta_{Age2} Age_{2it} + \cdots + \beta_{Age23} Age_{23it} + \beta_{Age24} Age_{24it} + \beta_{Age25+} Age_{25+it} + \\ & + \beta_{Birth2} Birth_{2it} + \beta_{Child2} Child_{2it} + \cdots + \beta_{Birth5} Birth_{5it} + \beta_{Child5} Child_{5it} + \\ & + B_K X_{it} + (\alpha_i + u_{it}) \end{aligned} \tag{1}$$

In Equation 1, coefficients β_{BB3}-β_{BB1} describe the dynamics of life satisfaction 3, 2, and 1 year before the (first) the birth (BB - before the birth). The coefficients β_{Age0}-β_{Age25+} describe how life satisfaction changes with the age of the child. The reference category is the period 4 years or more before the birth. The coefficients β_{Birth2}-β_{Birth5} and β_{Child2}-β_{Child5} control for the birth and presence of other children (in this case second, third, fourth, and fifth child). B_K is a vector of effects of control variables.

We estimate our models on the full sample of respondents rather on the sample restricted to parents, which allows precise estimation of the effect of age and period (wave). In analyses on samples restricted to parents, distinguishing between the effects aging of the child, aging of the parents, and period change may be cumbersome.

In order to investigate how the additional factors (such e.g. education and age of parents, their household income and marital status) moderate the trajectories of life satisfaction of parents, we estimate stratified models. To do so, we divide our sample into sub-samples, e.g. persons with higher and with lower education, those who experienced divorce and those who didn't, etc. Subsequently, we estimate separate equivalent models on each of these subsamples.

5.3 Variables

Life satisfaction is measured with the question: *To what extent are you satisfied with your life in general at the present time?*, with the answers ranging from 5 – *fully satisfied* to 1 – *not at all satisfied*. The overall sample mean life satisfaction is 2.77, the average was changing considerably across time, with the decline occurring between 1994 (average life satisfaction of 2.28) and 1998 (average life satisfaction of 2.08), followed by a rather steady increase which led to the average value of life satisfaction of 3.4 in 2012.

Stages of parenthood are coded as a set of dichotomous variables, marked in Equation 1 as BB_{3it}-BB_{1it} and Age_{0it}-Age_{25+it}. They take the value of 1 during the respective period (e.g. Age_{0it} takes the value 1 in the year when the child is aged 0, and the value 0 otherwise). The last of these variables, Age_{25+it}, refers not to a specific year but to a rage of years, as it codes as 1 all periods when the child is 25 years old or older.

Control variables include:

- age (linear and quadratic component), with the values centered on the overall mean;
- self-assessment of own health, with answers from 1 – *very good* to 5 – very bad; with reversed scale so that higher values indicate better health, and centered on the overall mean;
- marital status: dichotomous variables code being single, cohabiting without marriage, and being divorced or widowed; 'married' serves as the reference category'

- equivalent yearly household income per capita, expresses in Rubles of the year 2000;
- employment status coded with two dichotomous variables: not being employed, and being registered as unemployed;
- a set of dummies marking the waves of the survey.

Stratification analysis requires that the sample is divided into sub-samples. Therefore, the variables used to stratify the sample need be time-invariant, so that the classification of variables between the subgroups did not change across the waves.

The stratification variables used in this analysis include:

- gender of the respondent;
- education: persons with tertiary education vs. those with lower than tertiary education;
- age at birth: persons who experienced their first birth before the median age at first birth, vs. those who experienced it later (median age calculated separately for men and women);
- household income per capita: respondents whose household income was over the median (wave-specific) income at least half of the observations, vs. those whose income was under the median (wave-specific) income at least in half of the cases;
- marriage stability: respondents who declared that they were divorced at least once during the panel, vs. respondents who were never divorced;
- region of residence: residents of Moscow and Sankt Petersburg vs. residents of other regions;
- place of residence: persons living in regional centers vs. residents of cities vs. residents of rural areas;
- ethnicity: ethnic Russians, defined as persons who were speaking only Russian in their household and in their parental household, vs. ethnic minorities, defined as persons who were speaking a different language than Russian either in their household or in their parental household.

Additionally, we also stratified by time (years 1994-2003 vs. 2004-2012) to observe a change that occurred over time.

6 Results

6.1 Descriptive results

We start by investigating the dynamics of average life satisfaction associated with parenthood. Figure 1 presents these data for the first, and second birth.

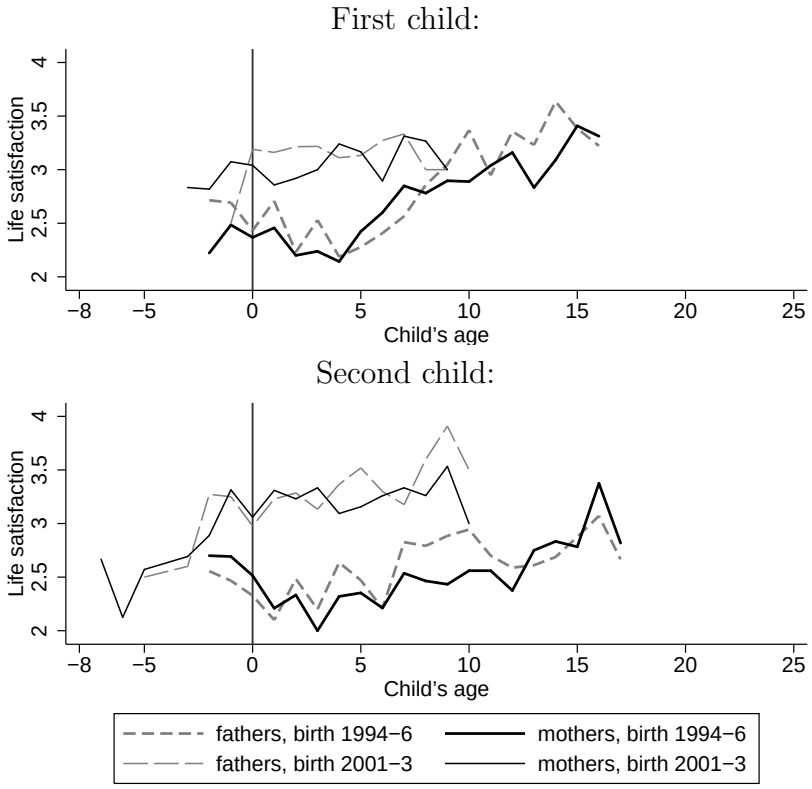

Figure 1: Average life satisfaction of (prospective) parents before and after the childbirth, compared with life satisfaction of childless people of similar age. Separately for the first and second child, for selected waves.
Source: RLMS-HSE data, waves 5-7 and 10-12.
Note: Graphs only for subgroups with $n >= 6$.

The characteristic pattern of life satisfaction increasing before the birth and subsequently declining is not clearly visible for the first child. However, for the second child life satisfaction of parents is closer to the expected trajectory.

6.2 Multivariate analysis of life satisfaction dynamics

Table 2 shows the results of fixed effects regressions for women and men, for the first child, second child, and third child respectively. The trajectories of life satisfaction estimated by these models are also presented in Figure 2.

The coefficients of control variables shown in Table 2 are overall consistent with the literature. The relationship between age and life satisfaction is U-shaped, never married, cohabiting, and divorced or widowed persons are less satisfied than married persons, lack of employment, and in some models also being registered as unemployed correlate negatively, and household income correlates positively with life satisfaction. The only exception is the lack of correlation between subjective health and life satisfaction.

Table 2: Fixed effects regression of life satisfaction on stages of parenthood and control variables

	Women 1st child	Women 2nd child	Women 3rd child	Men 1st child	Men 2nd child	Men 3rd child
3y bef birth	−0.01	0.09	0.32	−0.15	0.14	−0.02
	(0.968)	(0.413)	(0.064)$^{+}$	(0.542)	(0.272)	(0.923)
2y bef birth	0.01	0.11	0.01	−0.16	0.17	0.19
	(0.971)	(0.256)	(0.967)	(0.402)	(0.158)	(0.365)
1y bef birth	0.02	0.21	0.20	−0.02	0.12	0.13
	(0.908)	(0.023)*	(0.194)	(0.901)	(0.284)	(0.498)
birth	−0.02	0.14	0.19	−0.03	0.11	0.18
	(0.886)	(0.121)	(0.194)	(0.850)	(0.287)	(0.330)
1 y.o.	−0.11	0.18	0.11	0.01	0.06	0.25
	(0.509)	(0.040)*	(0.412)	(0.975)	(0.549)	(0.155)
2 y.o.	−0.13	0.15	0.10	−0.05	0.23	−0.04
	(0.414)	(0.098)$^{+}$	(0.507)	(0.789)	(0.029)*	(0.834)
3 y.o.	−0.03	0.22	−0.01	0.05	0.26	0.21
	(0.852)	(0.012)*	(0.950)	(0.766)	(0.016)*	(0.241)
4 y.o.	−0.10	0.10	−0.05	−0.09	0.16	0.17
	(0.545)	(0.284)	(0.753)	(0.593)	(0.143)	(0.342)
5 y.o.	−0.07	0.13	0.04	0.08	0.19	0.26
	(0.667)	(0.145)	(0.767)	(0.668)	(0.077)$^{+}$	(0.145)
6 y.o.	−0.07	0.06	0.05	0.07	0.17	0.30
	(0.673)	(0.479)	(0.746)	(0.691)	(0.122)	(0.100)$^{+}$
7 y.o.	−0.09	0.13	0.18	0.06	0.27	0.36
	(0.600)	(0.153)	(0.207)	(0.748)	(0.015)*	(0.045)*

8 y.o.	−0.05	0.06	0.24	0.08	0.28	0.56
	(0.738)	(0.517)	(0.100)	(0.659)	(0.012)*	(0.001)*
9 y.o.	0.02	0.10	0.21	0.14	0.36	0.43
	(0.897)	(0.258)	(0.145)	(0.448)	(0.001)*	(0.016)*
10 y.o.	−0.06	0.16	0.28	0.17	0.41	0.49
	(0.721)	(0.086)+	(0.059)+	(0.353)	(0.000)***	(0.006)*
11 y.o.	−0.01	0.12	0.29	0.18	0.34	0.57
	(0.954)	(0.184)	(0.043)*	(0.312)	(0.002)*	(0.001)*
12 y.o.	−0.01	0.17	0.34	0.17	0.38	0.59
	(0.970)	(0.069)+	(0.020)*	(0.341)	(0.001)***	(0.001)***
13 y.o.	0.00	0.15	0.27	0.23	0.34	0.45
	(0.992)	(0.110)	(0.059)+	(0.198)	(0.003)*	(0.012)*
14 y.o.	0.00	0.17	0.38	0.25	0.32	0.46
	(0.984)	(0.073)+	(0.008)*	(0.173)	(0.005)*	(0.010)*
15 y.o.	0.07	0.15	0.33	0.30	0.42	0.57
	(0.689)	(0.105)	(0.023)*	(0.100)+	(0.000)***	(0.001)*
16 y.o.	0.02	0.20	0.40	0.31	0.44	0.55
	(0.908)	(0.029)*	(0.007)*	(0.091)+	(0.000)***	(0.002)*
17 y.o.	0.03	0.16	0.35	0.36	0.39	0.55
	(0.845)	(0.082)+	(0.016)*	(0.046)*	(0.001)***	(0.002)*
18 y.o.	−0.01	0.22	0.39	0.28	0.40	0.60
	(0.975)	(0.022)*	(0.008)*	(0.120)	(0.001)***	(0.001)***
19 y.o.	0.03	0.15	0.34	0.29	0.35	0.48
	(0.850)	(0.121)	(0.020)*	(0.118)	(0.003)*	(0.009)*
20 y.o.	0.04	0.21	0.44	0.29	0.37	0.50
	(0.802)	(0.031)*	(0.003)*	(0.111)	(0.002)*	(0.006)*
21 y.o.	0.04	0.21	0.41	0.27	0.33	0.59
	(0.814)	(0.029)*	(0.005)*	(0.136)	(0.006)*	(0.001)*
22 y.o.	0.07	0.26	0.37	0.28	0.39	0.53
	(0.661)	(0.009)*	(0.014)*	(0.134)	(0.001)*	(0.004)*
23 y.o.	0.07	0.20	0.53	0.30	0.36	0.48
	(0.697)	(0.045)*	(0.001)***	(0.111)	(0.003)*	(0.010)*
24 y.o.	0.14	0.32	0.43	0.31	0.35	0.45
	(0.417)	(0.002)*	(0.006)*	(0.101)	(0.004)*	(0.020)*
birth of the 1st child		−0.04	−0.04		0.02	0.02
		(0.633)	(0.619)		(0.829)	(0.810)
1st child present		−0.12	−0.12		0.05	0.06
		(0.107)	(0.099)+		(0.526)	(0.501)
birth of the 2nd child	0.00		0.01	−0.03		0.01
	(0.957)		(0.863)	(0.674)		(0.917)
2nd child present	−0.00		0.02	−0.03		0.07
	(0.939)		(0.760)	(0.617)		(0.232)
birth of the 3rd child	0.07	0.08		0.07	0.06	
	(0.550)	(0.490)		(0.619)	(0.675)	
3rd child present	−0.04	0.01		0.09	0.08	
	(0.678)	(0.944)		(0.355)	(0.445)	
birth of the 4th child	−0.41	−0.40	−0.44	−0.01	0.02	−0.02

	(0.074)$^{+}$	(0.081)$^{+}$	(0.057)$^{+}$	(0.959)	(0.936)	(0.935)
4th child present	−0.17	−0.16	−0.26	−0.02	0.02	−0.06
	(0.296)	(0.315)	(0.122)	(0.929)	(0.924)	(0.742)
birth of the 5th child	0.34	0.36	0.34	−0.03	−0.04	−0.06
	(0.307)	(0.277)	(0.303)	(0.928)	(0.901)	(0.841)
5th child present	0.34	0.37	0.31	0.07	0.07	−0.01
	(0.082)$^{+}$	(0.058)$^{+}$	(0.120)	(0.724)	(0.700)	(0.956)
subjective health	0.00	0.00	0.00	−0.00	−0.00	−0.00
	(0.168)	(0.177)	(0.176)	(0.866)	(0.896)	(0.863)
age	−0.06	−0.07	−0.06	−0.03	−0.03	−0.02
	(0.029)*	(0.027)*	(0.038)*	(0.430)	(0.427)	(0.514)
age^2	0.00	0.00	0.00	0.00	0.00	0.00
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
never married	−0.05	−0.04	−0.05	−0.13	−0.12	−0.12
	(0.078)$^{+}$	(0.092)$^{+}$	(0.066)$^{+}$	(0.000)***	(0.000)***	(0.000)***
cohabiting	−0.03	−0.03	−0.03	−0.08	−0.08	−0.08
	(0.210)	(0.178)	(0.166)	(0.004)*	(0.005)*	(0.005)*
divorced or widowed	−0.20	−0.20	−0.20	−0.25	−0.25	−0.25
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
not employed	−0.11	−0.11	−0.11	−0.25	−0.25	−0.24
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
registered unemployed	−0.08	−0.09	−0.09	0.07	0.07	0.06
	(0.012)*	(0.010)*	(0.007)*	(0.113)	(0.139)	(0.211)
hh income	0.00	0.00	0.00	0.00	0.00	0.00
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Observations	78162	78162	78162	57482	57482	57482
N(id)	18591	18591	18591	14944	14944	14944

Note: $^{+}$ $p < 0.10$, * $p < 0.05$, *** $p < .001$; p-values in parentheses

Source: RLMS-HSE data, waves 5-20

In contrast to the results from Western countries (Myrskylä and Margolis, 2012; Baetschmann et al., 2012), in Russia we observe no increase of life satisfaction in the period surrounding the first birth, neither for men nor for women. The changes of life satisfaction in this period are not statistically significant. Significant and positive effect of being a father occurs only later in life: when the first child is aged 15 or older.

However, we observe increase of life satisfaction in the period surrounding the second birth. Life satisfaction of mothers increases in the year preceding the first birth, and remains elevated until the child is three years old. This pattern is similar to the one observed in Western countries for the first child. This result suggests that the second child is indeed the first "child of choice" in Russia, which is consistent with hypothesis C1.

Life satisfaction of fathers increases when their second child is two years old, and remains higher thereafter. Also life satisfaction of mothers of second children aged 10 or older is significantly higher than before the second birth. Similar pattern of elevated life

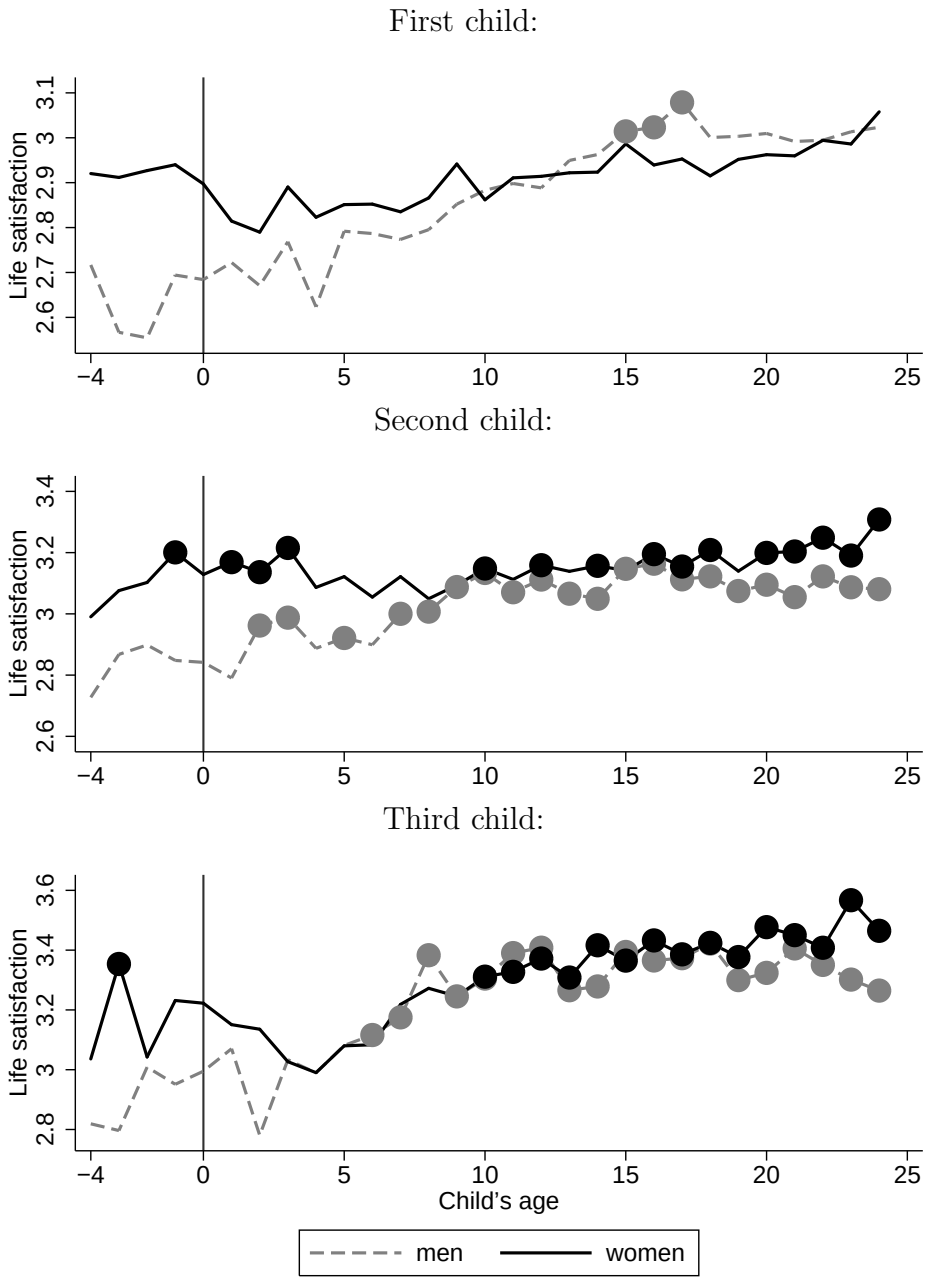

Figure 2: Predicted life satisfaction of (prospective) parents before and after the childbirth. Separate models for men and women, and for the first, second, and third child.
Source: RLMS-HSE data, waves 5-20.
Note: Predictions from regression models shown in Table 2. The prediction does not include the effect of aging of parents. The dots mark the coefficients significantly different from zero, i.e. periods when life satisfaction is significantly higher or lower than in the reference period 4 or more years before the birth.

satisfaction at older ages of the child is visible for the third child. Life satisfaction of fathers is statistically significantly higher than before the third birth after the child is 6, and of mothers – after the child is 10 years old. This pattern of positive life satisfaction effects of being a parent of a second or third child at older ages of the child is a new result which did not appear in the literature investigating Western data. It is likely that it is one of aspects of Russian specificity, where second and further children are considered a sign of economic and family success, and where fertility at higher parity levels is often restricted for economic and other reasons.

6.3 Moderating factors

The literature for the Western countries investigated the moderating effect of age at birth, household income, marital status, and education. We repeat these tests, enriching them by accounting for regional and ethnic variation, as well as for changes that occurred over time. In contrast to previous papers (Myrskylä and Margolis, 2012), we present the results both for the first and second child, because in Russia life satisfaction responded more strongly to the birth of the second child.

Figure 3 shows the moderating effect of education. The trajectory of life satisfaction of fathers with tertiary education is clearly more upward than the one of lower educated fathers, especially for the first child. In case of second child the difference concerns mostly women: only women with tertiary education experience elevated life satisfaction when their second child is between 1 and 4 years old. These results differ from those known from the literature, which is not surprising taking into account the overall different dynamics of life satisfaction. However, they point out to the conclusion that higher education of parents makes parenthood more satisfactory.

Subsequent Figure 4 shows the moderating factor of age, differentiating between parents who had their first child below the median age, and those who became parents after the media age (which in our sample is 24 years for women and 26 years for men). The trajectories of the two groups are similar, mostly because significant effects are basically absent is both groups; The difference concerns mostly levels with older parents being overall more satisfied with their lives than younger parents. However, only men and women who entered parenthood at later age experience increased life satisfaction before their second child is born, and (fathers) directly afterwards. This may be interpreted in terms of anticipation effect occurring only among older parents: it is likely that the high life satisfaction in this period signifies the readiness (in economic and social terms) for becoming a parent.

Figure 5 shows the moderating effect of income, comparing the estimates for parents who in at least half of observations gained the household income per capita above the median, and those who were more often under the median income. Not surprisingly, richer

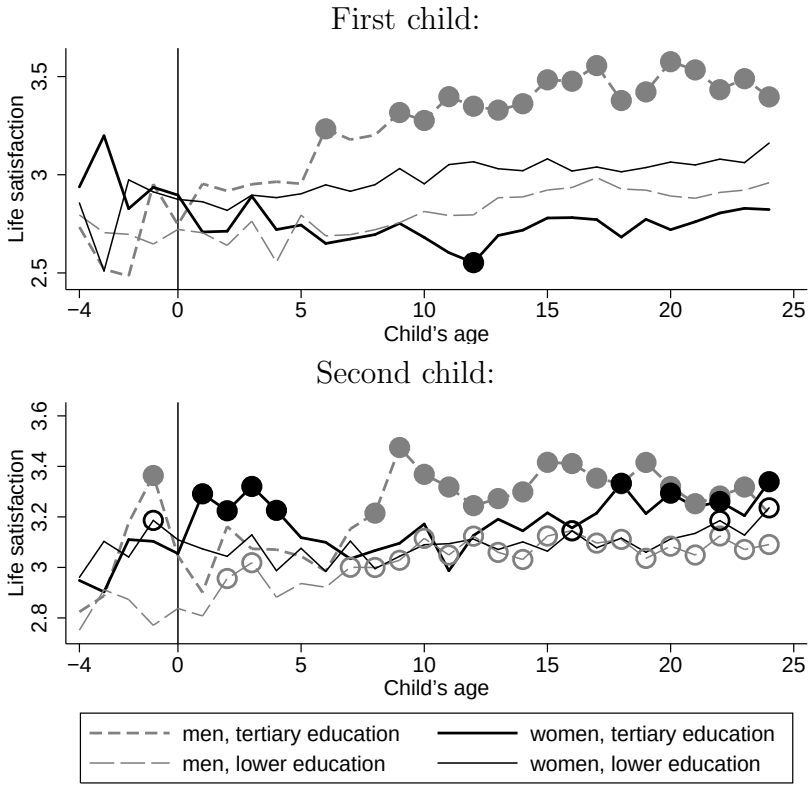

Figure 3: Predicted life satisfaction of (prospective) parents before and after the childbirth. Moderating effect of education. Fixed effects estimation for the first child.
Source: RLMS-HSE data, waves 5-20.
Note: The prediction does not include the effect of aging of parents. The dots mark the coefficients significantly different from zero, i.e. periods when life satisfaction is significantly higher or lower than in the reference period 4 or more years before the birth.

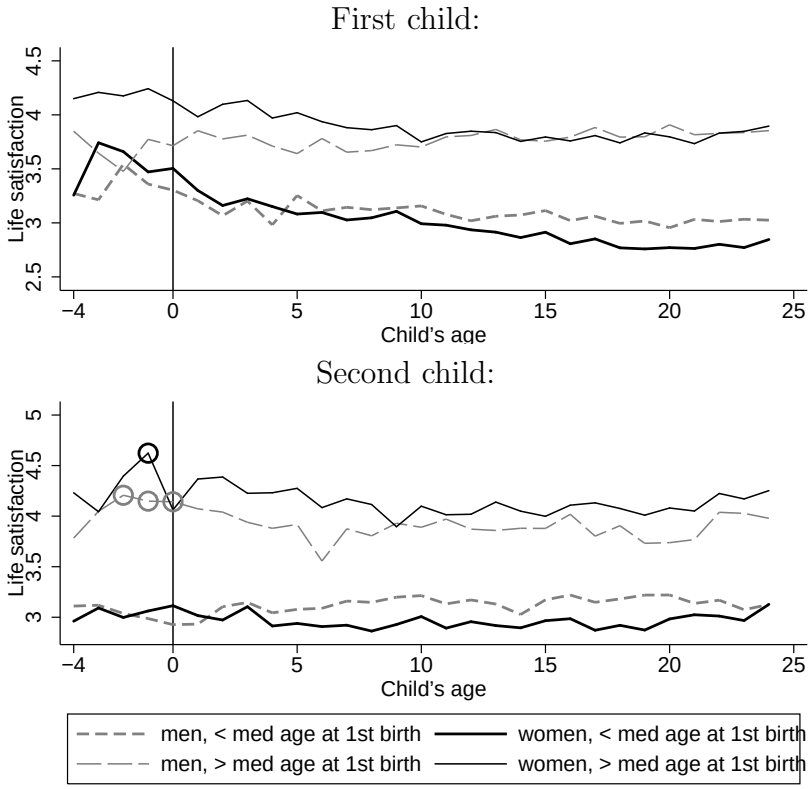

Figure 4: Predicted life satisfaction of (prospective) parents before and after the childbirth. Moderating effect of age. Fixed effects estimation for the first child.
Source: RLMS-HSE data, waves 5-20.
Note: The prediction does not include the effect of aging of parents. The dots mark the coefficients significantly different from zero, i.e. periods when life satisfaction is significantly higher or lower than in the reference period 4 or more years before the birth.

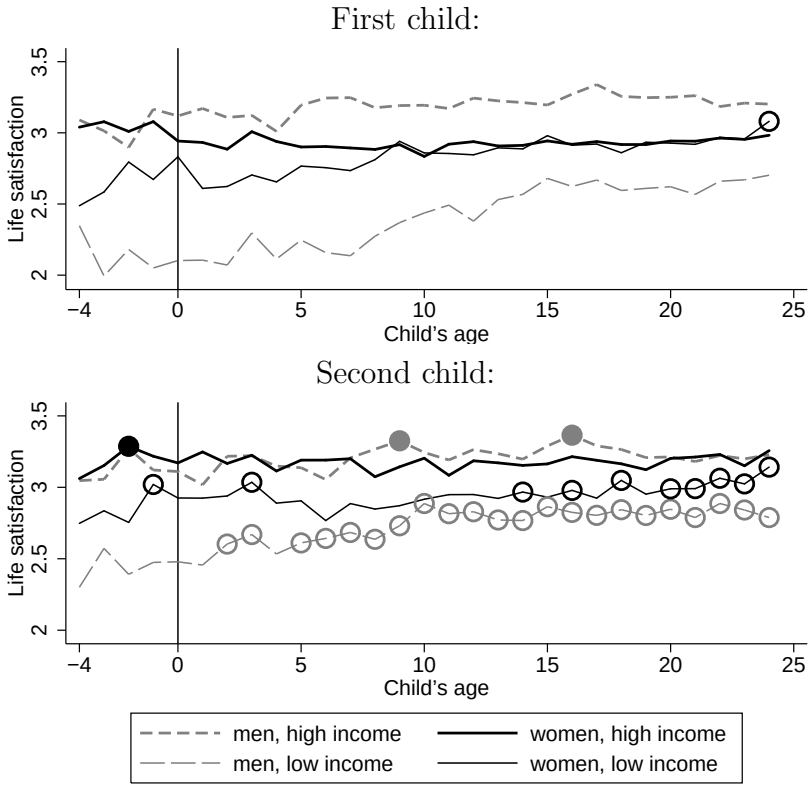

Figure 5: Predicted life satisfaction of (prospective) parents before and after the childbirth. Moderating effect of household income. Fixed effects estimation for the first child.
Source: RLMS-HSE data, waves 5-20.
Note: The prediction does not include the effect of aging of parents. The dots mark the coefficients significantly different from zero, i.e. periods when life satisfaction is significantly higher or lower than in the reference period 4 or more years before the birth.

parents are overall more satisfied with their lives than poorer parents, and the difference is larger among men than among women.

Life satisfaction trajectories differ only in case of the second child. Whereas richer persons experience some anticipation effect (i.e. elevated life satisfaction before the birth), the poorer parents derive more satisfaction at older ages of the second child, both men and women.

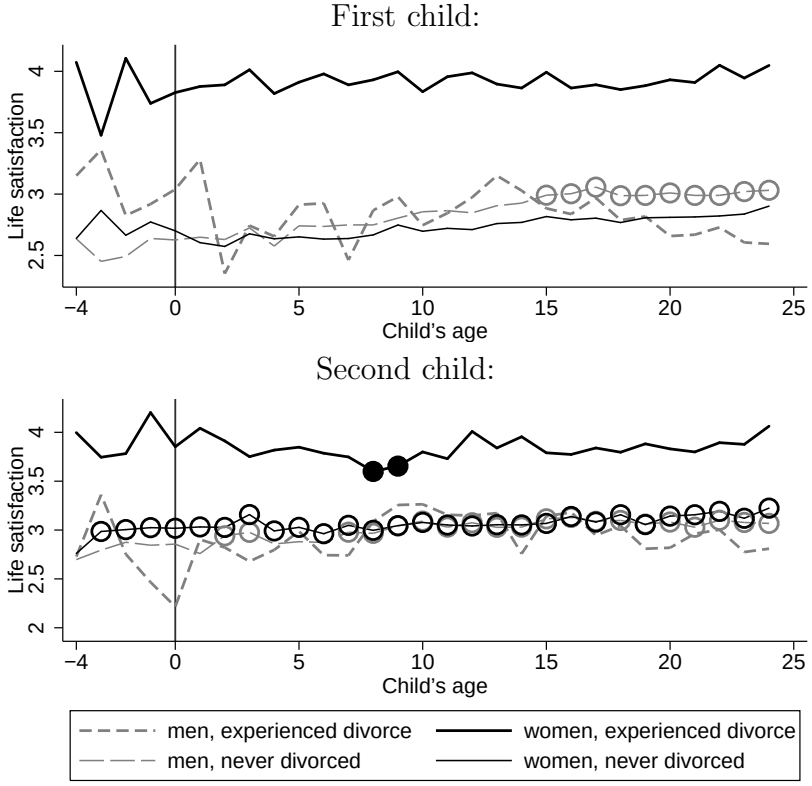

Figure 6: Predicted life satisfaction of (prospective) parents before and after the childbirth. Moderating effect of experiencing divorce. Fixed effects estimation for the first child.

Source: RLMS-HSE data, waves 5-20.

Note: The prediction does not include the effect of aging of parents. The dots mark the coefficients significantly different from zero, i.e. periods when life satisfaction is significantly higher or lower than in the reference period 4 or more years before the birth.

Figure 6 compares parents who were recorded as divorced at some point during the panel, with persons who did not experience a divorce. The life satisfaction of women who experienced a divorce is overall highest, which may be a sign of positive selection on socio-economic characteristics.

Parenthood at older ages of the child is accompanied by elevated levels of life satisfaction among fathers of the first child after the age of 15, and among parents of second child it begins earlier: starting at 3 years before the birth among women, and at the child's age of 2 among men.

The observed regularity is consistent with previous results showing that family events

(specifically, marriage), contribute stronger to life satisfaction of more gender traditional couples, who likely are also lower educated (Stutzer and Frey, 2006).

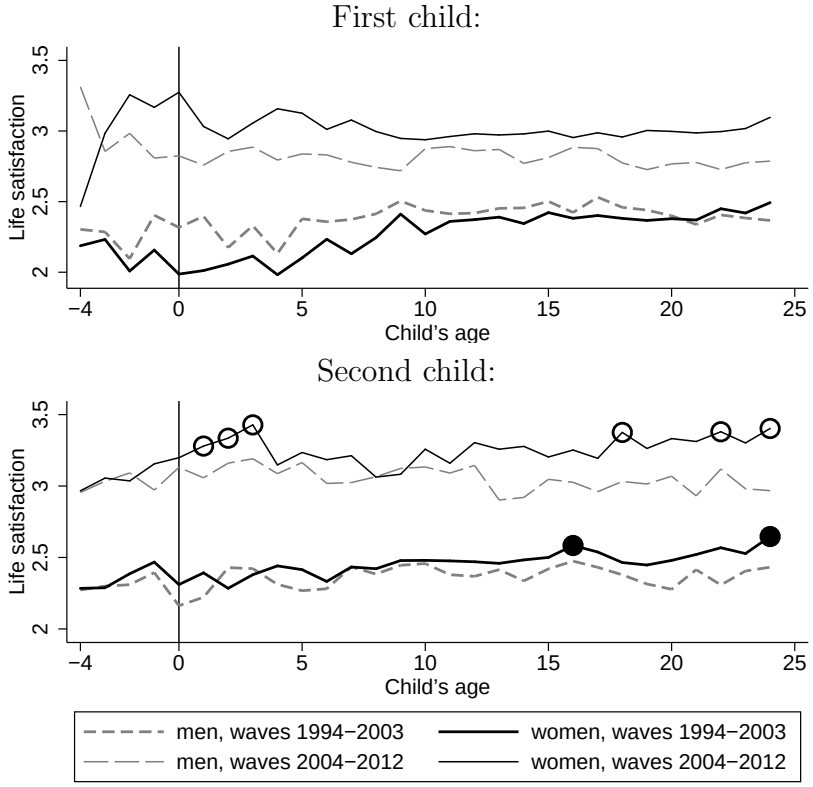

Figure 7: Predicted life satisfaction of (prospective) parents before and after the childbirth. Change over time. Fixed effects estimation for the first child.
Source: RLMS-HSE data, waves 5-20.
Note: The prediction does not include the effect of aging of parents. The dots mark the coefficients significantly different from zero, i.e. periods when life satisfaction is significantly higher or lower than in the reference period 4 or more years before the birth.

The following figures 7-10 investigate the moderating factors that did not mark a strong presence in Western literature, i.e. related to temporal, geographical, and ethical variation.

Figure 7 shows the change that occurred over time. The main aspect of this change is the overall increase of life satisfaction. The trajectories associated with parenthood are similar in both periods. The main difference concerns mothers when their second child is 1, 2, and 3 years old: life satisfaction of such mothers went up in the period 2004-2012, but not in the preceding period 1994-2003. This may suggest that in the latter period new policy solutions improved the conditions for parenting small children.

The figures 8 and 9 focus on regional variation, particularly relevant for such a large and differentiated country as Russia. Figure 8 distinguishes between parents living in either Moscow or Sankt Petersburg, and parents living in other regions of the country.

The sample for Sankt Petersburg and Moscow is relatively small, which may explain

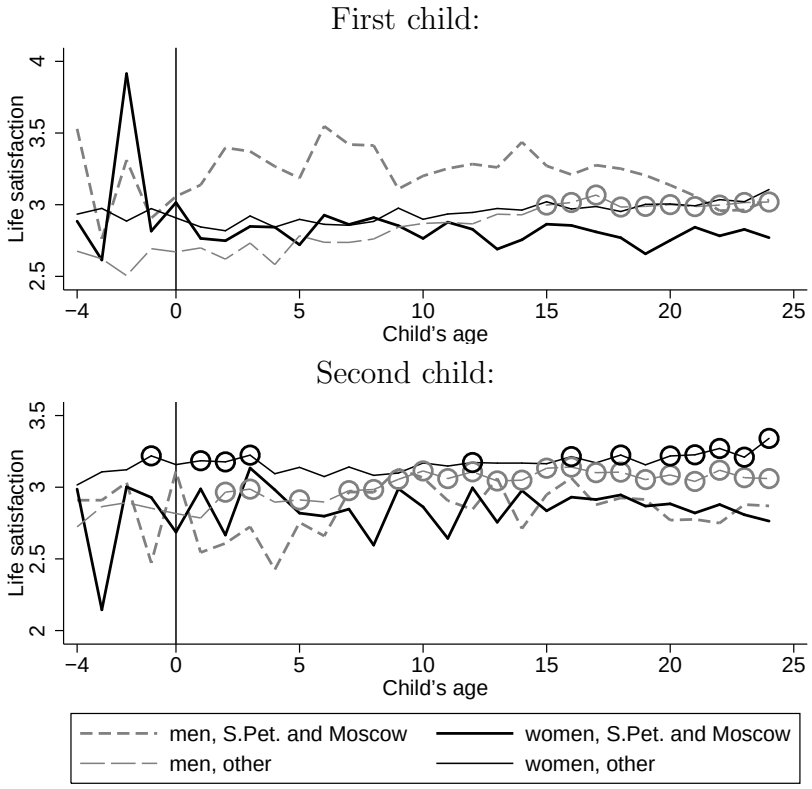

Figure 8: Predicted life satisfaction of (prospective) parents before and after the childbirth. Moderating effect of place of residence. Fixed effects estimation for the first child.
Source: RLMS-HSE data, waves 5-20.
Note: The prediction does not include the effect of aging of parents. The dots mark the coefficients significantly different from zero, i.e. periods when life satisfaction is significantly higher or lower than in the reference period 4 or more years before the birth.

the lack of statistically significant effects. Still, it is noticeable that the previously observed pattern of life satisfaction increasing at older ages of the child, all ages of the second child among men, and in the period surrounding the second birth among women occurs only in the regions outside of Sankt Petersburg and Moscow.

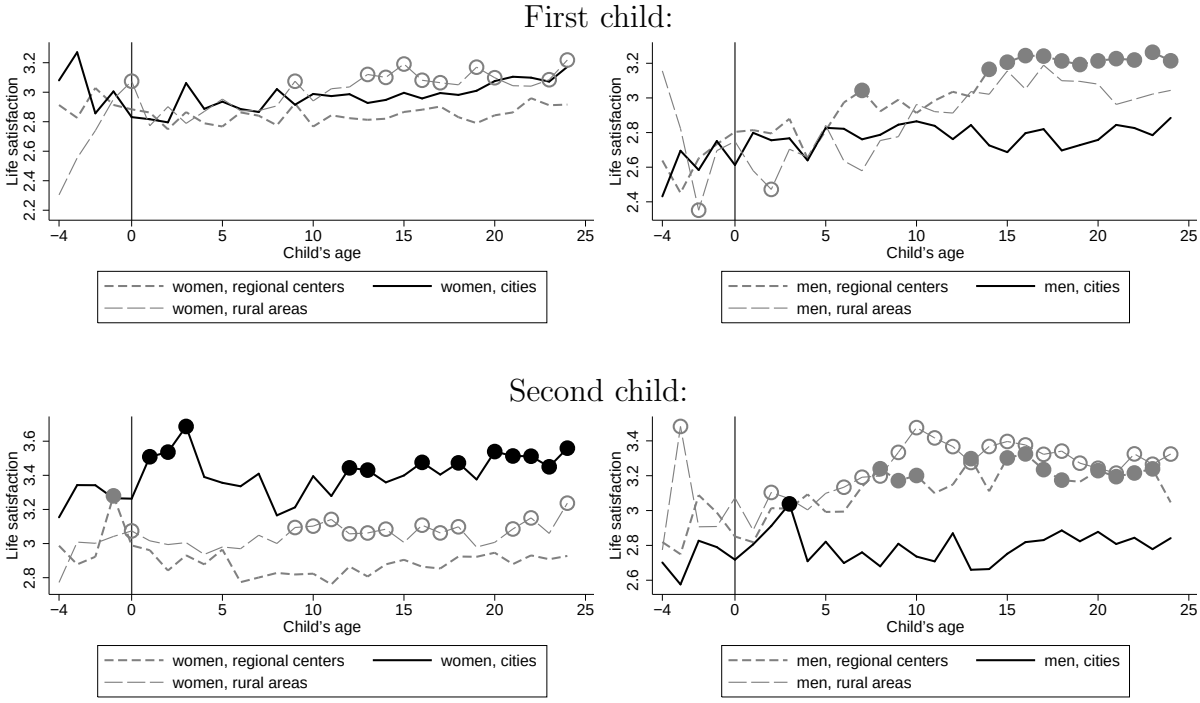

Figure 9: Predicted life satisfaction of (prospective) parents before and after the childbirth. Moderating effect of place of residence. Fixed effects estimation for the first child.
Source: RLMS-HSE data, waves 5-20.
Note: The prediction does not include the effect of aging of parents. The dots mark the coefficients significantly different from zero, i.e. periods when life satisfaction is significantly higher or lower than in the reference period 4 or more years before the birth.

The Figure 9 also looks at regional variation, this time between regional centers, cities, and rural areas. The differences are quite clear. Being a mother of a second child seems to be gratifying – bot in the period surrounding the birth, and after the child is around 10 – mostly for women living in cities.

The positive effect of parenthood at older ages of the child characterizes mainly parents living in rural areas (mothers, and fathers with second child). For men, also living in a regional center is associated with the increase of life satisfaction at older ages of first and second child. This regularity is consistent with what the previous results on regional variation (Figure 8), and on the moderating effect of income (Figure 5).

Finally, Figure 10 presents the moderating effect of ethnicity. The flat trajectory of life satisfaction seems to characterize mainly the ethnic Russians. In contrast to that, the trajectories for minorities more resemble the ones known from Western literature, with life satisfaction of women temporarily increasing in the period surrounding (both first and second) birth.

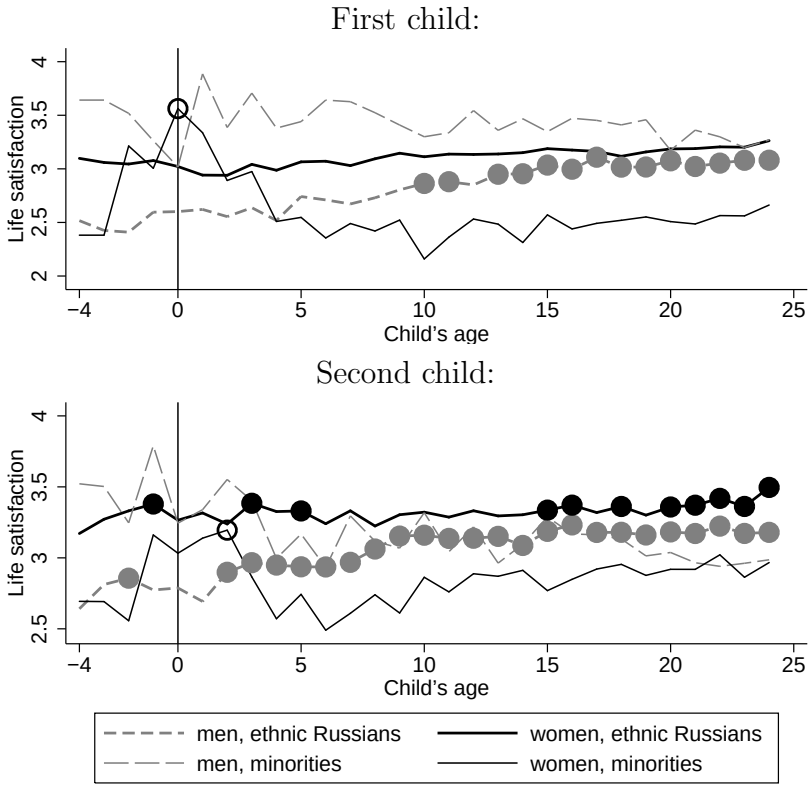

Figure 10: Predicted life satisfaction of (prospective) parents before and after the childbirth. Moderating effect of ethnicity. Fixed effects estimation for the first child.
Source: RLMS-HSE data, waves 5-20.
Note: The prediction does not include the effect of aging of parents. The dots mark the coefficients significantly different from zero, i.e. periods when life satisfaction is significantly higher or lower than in the reference period 4 or more years before the birth.

7 Discussion of results

The goal of this paper was to extend the existing knowledge on life satisfaction consequences of parenthood by examining trajectories of life satisfaction of (prospective) parents in a new country: Russia. Russian Federation differs in many aspects from the countries analyzed in this context previously (mainly Germany, see: Myrskylä and Margolis, 2012; Baetschmann et al., 2012; Clark et al., 2008). This includes not only different political and economic conditions, but also different pattern of fertility and different approaches to parenthood.

Our results showed a different trajectories of life satisfaction than those observed in Western countries. The result standing against all our knowledge is probably the lack of substantial temporary positive effect of first childbirth among women, that starts a few years before the birth. The consistency of this result has been so far interpreted in terms of novelty of the experience, and it was related to body functioning during pregnancy and birth (Myrskylä and Margolis, 2012, p. 25)

Our analysis demonstrated that in Russia mainly the second, and not the first child is associated with increased life satisfaction of women. Qualitative evidence describes first birth as an "romantic and quasi-automatic" event, a natural consequence of forming a relationship, which is initiated by the woman herself rather than being a decision of the couple (Rotkirch and Kesseli, 2012, 2010; Zakharov, 2008). In contrast to that, second child is in Russia more often a matter of conscious consideration (Rotkirch and Kesseli, 2012). All this suggests, that the temporarily and positive effect of childbirth should be related to the planned nature of this event, so that more conscious decision is associated with more positive life satisfaction outcomes (Baetschmann et al., 2012; Hayford and Guzzo, 2010). Consistently with this interpretation, the positive anticipation effect in case of the second child in Russia occurs only among parents who were older at birth.

A set of results in our analysis is consistent with Western literature, and with pattern associated with the second demographic transition (Myrskylä and Margolis, 2012; Zakharov, 2008). Life satisfaction trajectory associated with parenthood is more positive among more educated men and women, and among women living in cities (for a second child); also persons becoming parents at later ages are more satisfied with their lives and experience a stronger anticipation effect. Similar regularities suggest similar driving forces as in Western countries.

However, another set of results suggests different mechanisms linking parenthood and life satisfaction. In Russia, more positive trajectory of life satisfaction was experienced by men and women with low income, never divorced persons, those living outside of Moscow and Sankt Petersburg, and men living in rural areas and regional centers. Moreover, in these groups the positive effect of being a parent occurs mostly at older ages of the child, and not – as in Western countries – in the period surrounding the birth. This suggests

that in Russia still prevalent is a more "traditional" pattern of parenthood, where the benefits of parenting arrive mostly at later ages, and when the rural, less wealthy, and more traditional population gains most from being a parent. This pattern is basically invisible in analyses for Germany and UK (Myrskylä and Margolis, 2012), but our analysis suggests that it may be still present is less wealthy and more traditional societies.

Our results have implications for the understanding of Russian fertility pattern. First, it seems that the relatively difficult experience of rising the first child may block the decision to have a second child. Indeed, both higher well-being (Parr, 2010), and more satisfactory partnerships (Myers, 1997) were shown to increase a chance of having a (subsequent) child. Our result show basically no positive effect of the first child on life satisfaction of parents, which is consistent with the low frequency of second births.

On a more general level, this analysis demonstrates the need to conduct replication studies in new social contexts. Although building a context-specific knowledge may be very important for particular policy and other goals, the main ambition of scientific community is to deliver general conclusions about more or less universal mechanisms. This goal can only be achieved by extending the empirical base of our analyses. In this light, investigating the case of Russia is just the first step in the right direction.

This paper has limitations. First, with the models used, we only roughly accounted for the birth and presence of other children, without testing for interaction between ages of children. (E.g. is having two toddlers at home particularly difficult stage?). In this aspect this paper performs a bit better than other similar studies (Myrskylä and Margolis, 2012), but improvement is possible. New methodological studies discussing the consequences of specific models and recommending best practices would definitely be desirable.

Second important limitation is that many of the regularities presented in this paper could be investigated deeper. Presenting new material for new social context asks for appropriate careful discussion. For instance, when did the changes over time occur and to which factors could we relate them? What are the consequences of frequent divorces and resulting complicated family trajectories? Can we observe a generational change? However, the goal of this paper was to present only the basic results which allow comparison with the results for Western countries. Further in-depth analyses can be done best with separate papers in the future.

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